

**REMARKS**

Claims 1-4, 6-12, 14-20, and 22-24 remain pending in this application. Claims 1-4, 6-12, 14-20, and 22-24 stand rejected. Claims 1-4, 8-12, 16-20, and 22-24 have been amended. No new matter has been added. For example, support for the amendments can be found at ¶¶ 62, 78, and 79 and Fig. 2 of the present application. Favorable reconsideration and allowance of the pending claims are respectfully requested.

**Interview Summary**

On December 10, 2009, the undersigned Applicants' representative and Patent Examiner Aristocratis Fotakis conducted a telephonic interview. Applicants' representative would like to thank Examiner Fotakis for the opportunity to participate in, and for the courtesy extended during, the telephonic interview regarding this application. The outstanding rejection and the cited references were discussed during the telephonic interview. Although no agreement was reached in regards to allowance, Examiner Fotakis suggested incorporating features found in Fig. 2 and corresponding portions of the specification of the present application into independent claims 1, 9, and 17. The foregoing amendments to the claims reflect the recommendations of Examiner Fotakis.

**Rejections Under § 103**

In consideration and determination of obviousness under 35 U.S.C. § 103 the Supreme Court in *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966), stated:

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary

considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy. . . .

According to MPEP § 2141, it is Office policy to follow *Graham v. John Deere Co.* in the consideration and determination of obviousness under 35 U.S.C. § 103. A determination of obviousness under § 103 requires the determination of the following factual inquiries: (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the pertinent art; and (4) evaluating evidence of secondary considerations, if any. MPEP § 2141. See *Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in KSR International Co. v. Teleflex Inc.*, 72 Fed. Reg. 57526, 57527 (Oct. 10, 2007).

Based on these factual inquiries, the obviousness or nonobviousness of the claimed subject matter is determined. Although prior art references need not teach or suggest all claim limitations, the Office must explain why the differences between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art. See 72 Fed. Reg. 57526 at 57528-29. Importantly, a conclusion of obviousness must be supported with some articulated reasoning with some rational underpinning; mere conclusory statements are not sufficient. See *id.*

Applicants respectfully submit that the Office Action has not established a *prima facie* case of obviousness because of nonobvious patentable differences between the cited references and claims 1-4, 6-12, 14-20, and 22-24. More particularly, Applicant respectfully submits that the Office Action has not established a *prima facie* case of obviousness because the cited references, taken alone or in combination, fail to disclose, teach, or suggest each and every element recited in claims 1-4, 6-12, 14-20, and 22-24.

At page 3 of the Office Action, claims 1, 6, 9, 14, 17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,282,231 to Norman et al. ("Norman") in view of U.S. Patent No. 6,184,822 to Fenton et al ("Fenton"). Applicants respectfully traverse the rejection in view of the foregoing amendments and the following remarks.

In regards to the obviousness rejection of claim 1, Applicants agree with the Office Action that Norman does not teach a correlator having a code of all ones for the pseudo random number (PRN) code. See Office Action at p. 3. According to the Office Action, "Fenton teaches of a GPS receiver wherein the correlator (#22) is disabled by providing to the correlator a signal of all 1s, such that the I-Q values pass through the correlator unchanged." See *id.* The Office Action alleges that it would have been obvious to use a code of all ones for the PRN code such that the spreaded carrier wave jamming signal passes through the correlator unchanged in order to identify the despreaded desired signal. See *id.* Applicants respectfully disagree for the following reasons. The correlator (#22) of Fenton is not provided for the purpose of identifying:

a carrier wave jamming signal with the crosscorrelator that is in a mode to identify carrier wave jamming signals by correlation with a fixed predetermined code for a pseudo random number (PRN) code, where the crosscorrelator has a code of all ones for the PRN code . . . ,

as recited in claim 1. Rather, Fenton merely discloses that "the correlator 22 is disabled by providing to the correlator a signal of all 1's, such that the I and Q values pass through the correlator unchanged." See Fenton at col. 6:26-29. Fenton, however, fails to disclose, teach, or suggest placing the correlator in a mode to identify carrier wave jamming signals using correlation with a fixed predetermined code of all ones for the PRN code, as recited in claim 1. Therefore, Applicants respectfully submit that the Office has failed to establish a *prima facie* case of obviousness using the combination of Fenton with Norman to arrive at claim 1. Therefore, the obviousness rejection with respect to claim 1 should be withdrawn.

Furthermore, Applicants respectfully submit that Norman and Fenton, taken alone or in combination, fail to disclose, teach, or suggest the additional elements recited in claim 1, as amended. In particular, Norman and Fenton, taken alone or in combination, fail to disclose, teach, or suggest the following elements recited in amended claim 1:

a first signal canceller that subtracts a replica of the carrier wave jamming signal from the spread spectrum signal and generates a resultant spread spectrum signal . . .

As correctly stated in the Office Action, neither Norman nor Fenton, disclose, teach, or suggest "a first signal canceller that subtracts a replica of the carrier wave jamming signal from the spread spectrum signal and generates a resultant spread spectrum signal," as recited in claim 1, as amended. See Office Action at p. 7.

Therefore, Applicants respectfully submit that claim 1, as amended, defines over Norman in view of Fenton. Accordingly, Applicants respectfully request withdrawal of the obviousness rejection of claim 1 and claim 6, which depends from claim 1. Claims 9 and 17 were amended in a manner similar to claim 1 and for reasons analogous to those presented with respect to claim 1, Applicants respectfully request withdrawal of the obviousness rejection with respect to 9 and 17, and respective claims 14 and 22.

At page 7 of the Office Action, claims 2-4, 10-12, and 18-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Norman and Fenton in view of U.S. Patent Application No. 2002/0012411 to Heinzel et al. ("Heinzel"). Applicants respectfully traverse the rejection in view of the foregoing amendments and the following remarks.

The Office Action alleges that Heinzel "teaches a signal generator that generates a replica carrier wave jamming signal and subtracts the replica carrier wave jamming signal from the spread spectrum signal to cancel the carrier wave jamming signal (page 1, paragraph [0011].)" See Office Action at p. 7. Applicants respectfully submit, however, that Heinzel fails to

disclose, teach, or suggest that the "first signal canceller . . . generates a resultant spread spectrum signal," as recited in amended claim 1. Therefore, claim 1 is distinguished from Heinzl, Norman, and Fenton, whether taken alone or in combination, at least on this basis.

Notwithstanding the patentability of claim 1 over Normal, Fenton, and Heinzl based on the foregoing amendments and remarks, Applicants respectfully submit that the combination of Heinzl with Norman and/or Fenton to arrive at claim 1 is improper because Heinzl teaches away from the combination. Applicants respectfully submit that to establish a *prima facie* case of obviousness, all of the teachings of the cited reference must be considered, even disclosures that teach away from the claimed invention. See MPEP § 2141.02. Thus, when a reference teaches away from the combination proposed in the Office Action it is improper to make the alleged combination or modification because the reference that teaches away from the combination or modification. See, e.g., MPEP § 2145.

Here, Heinzl teaches away from making the combination alleged in the Office Action because Heinzl discloses that generating a replica of the jamming signal and subtracting it from the received signal "is of value when the jamming signal is indeed a very narrowband CW signal, essentially a pure tone." See Heinzl at p. 1, ¶ 11. In regards to generating a replica of the jamming signal and subtracting it from the received signal, Heinzl further discloses:

This method has a severe drawback in the sense that if the replica generated is not indeed identical and 180 degrees out-of-phase from the jamming signal, one could actually be adding interference.

See *id.* Therefore, when all of the teachings of Heinzl are considered, Heinzl teaches that generating a replica of the jamming signal and subtracting it from the received signal has a "severe drawback." Therefore, it is improper to combine Heinzl with Norman and/or Fenton to arrive at claim 1 because Heinzl teaches away from the invention recited in claim 1.

Furthermore, Applicant respectfully submits that Heinzl fails to disclose, teach, or suggest the following elements recited in amended claim 1:

a second tracker that tracks the resultant spread spectrum signal;

a second signal canceller that subtracts the resultant spread spectrum signal from the tracked carrier wave jamming signal and produces a clean carrier wave jamming signal; and

a second signal processor connected to the first and second signal cancellers that receives the clean carrier wave jamming signal from the second signal canceller and generates the replica of the carrier wave jamming signal from the clean carrier wave jamming signal.

Heinzl is completely silent with respect to a second tracker for tracking a resultant spread spectrum signal generated by the first signal canceller. Furthermore, Heinzl is completely silent with respect to "a second signal canceller that subtracts the resultant spread spectrum signal from the tracked carrier wave jamming signal and produces a clean carrier wave jamming signal; and a second signal processor connected to the first and second signal cancellers that receives the clean carrier wave jamming signal from the second signal canceller and generates the replica of the carrier wave jamming signal from the clean carrier wave jamming signal," as recited in claim 1, as amended.

Therefore, Applicants respectfully submit that Norman and Fenton in view of Heinzl fail to disclose, teach, or suggest every element recited in claim 1. Accordingly, Applicants respectfully submit that claim 1 is nonobvious and patentable over Norman and Fenton in view of Heinzl. Claims 9 and 17 were amended in a manner similar to claim 1. Therefore, for reasons analogous to those presented with respect to claim 1, Applicants respectfully submit that claims 9 and 17 also are nonobvious and patentable over Norman and Fenton in view of Heinzl.

In regards, to obviousness rejection of claims 2-4, 10-12, and 18-20 over Norman and Fenton in view of Heinzl, Applicants respectfully submit that these claims are nonobvious and patentable over Norman and Fenton in view of Heinzl on the basis of their dependency from respective claims 1, 9, and 17. Applicants respectfully submit that if an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious. See MPEP § 2143.03. Accordingly, Applicants respectfully request withdrawal of the obviousness rejection with respect to claims 2-4, 10-12, and 18-20.

At page 9 of the Office Action, claims 7, 8, 15, 16, 23, and 24 were rejected under 35 U.S.C. 103(a) as being unpatentable over Norman and Fenton in view of U.S. Patent No. 6,621 ,855 to Van Stralen et al. ("Van Stralen"). Applicants respectfully traverse the rejection of the foregoing amendments and the following remarks.

Applicants respectfully submit that claims 7-8, 15-16, and 23-24 are nonobvious and patentable in view of their dependency from respective claims 1, 9, and 17 because Van Stralen fails to overcome the deficiencies of Norman and Fenton, whether taken alone or in combination. Accordingly, Applicants respectfully request withdrawal of the obviousness rejection with respect to claims 7, 8, 15, 16, 23, and 24.

### Conclusion

Applicants do not otherwise concede, however, the correctness of the Office Action rejections with respect to any of the dependent claims discussed above. Accordingly, Applicants hereby reserve the right to make additional arguments as may be necessary to further distinguish the dependent claims from the cited reference based on additional features contained in the dependent claims that were not discussed above. A detailed discussion of these differences is believed to be unnecessary at this time in view of the basic differences discussed above with respect to the independent claims.

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is now in condition for allowance. Accordingly, a timely Notice of Allowance to this effect is earnestly solicited. Nevertheless, Applicants respectfully request that the Examiner contact the undersigned representative by telephone prior to issuing a subsequent Office Action to discuss any outstanding issues with this application in the event that the foregoing amendments and remarks fail to advance the present application to allowance.

The Office is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No. 11-1110.

Respectfully submitted,



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